

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) 1151-4158PC1

### Box No. I TITLE OF INVENTION

ARTIFICIAL T HELPER CELL EPITOPES AS IMMUNE  
STIMULATORS FOR SYNTHETIC PEPTIDE IMMUNOGENS

### Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

UNITED BIOMEDICAL INC.  
25 Davids Drive  
Hauppauge, New York 11788  
US

☐ This person is also inventor.

Telephone No.  
(516) 273-2828

Facsimile No.  
(516) 273-1717

Teleprinter No.

State (that is, country) of nationality: US

State (that is, country) of residence: US

This person is applicant for the purposes of: ☐ all designated States ☒ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

### Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

WANG, Chang Yi  
47 Snake Hill Road  
Cold Spring Harbor, New York 11724  
US

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality: US

State (that is, country) of residence: US

This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

### Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: ☒ agent ☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

LIN, Maria C.H.  
Morgan & Finnegan, L.L.P.  
345 Park Avenue  
New York, New York 10154

Telephone No.  
(212) 758-4800

Facsimile No.  
(212) 751-6849

Teleprinter No.  
421792

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Box No.V DESIGNATION OF STATES**

The following designations are here made under Rule 4.9(a) (mark the applicable check-box; at least one must be marked):

**Regional Patent**

- ☒ **AP** ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ **EA** Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP** European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA** OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line) .....

**National Patent (if other kind of protection or treatment desired, specify on dotted line):**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> <b>AL</b> Albania .....                               | <input checked="" type="checkbox"/> <b>LS</b> Lesotho .....                                   |
| <input checked="" type="checkbox"/> <b>AM</b> Armenia .....                               | <input checked="" type="checkbox"/> <b>LT</b> Lithuania .....                                 |
| <input checked="" type="checkbox"/> <b>AT</b> Austria .....                               | <input checked="" type="checkbox"/> <b>LU</b> Luxembourg .....                                |
| <input checked="" type="checkbox"/> <b>AU</b> Australia .....                             | <input checked="" type="checkbox"/> <b>LV</b> Latvia .....                                    |
| <input checked="" type="checkbox"/> <b>AZ</b> Azerbaijan .....                            | <input checked="" type="checkbox"/> <b>MD</b> Republic of Moldova .....                       |
| <input checked="" type="checkbox"/> <b>BA</b> Bosnia and Herzegovina .....                | <input checked="" type="checkbox"/> <b>MG</b> Madagascar .....                                |
| <input checked="" type="checkbox"/> <b>BB</b> Barbados .....                              | <input checked="" type="checkbox"/> <b>MK</b> The former Yugoslav Republic of Macedonia ..... |
| <input checked="" type="checkbox"/> <b>BG</b> Bulgaria .....                              | <input checked="" type="checkbox"/> <b>MN</b> Mongolia .....                                  |
| <input checked="" type="checkbox"/> <b>BR</b> Brazil .....                                | <input checked="" type="checkbox"/> <b>MW</b> Malawi .....                                    |
| <input checked="" type="checkbox"/> <b>BY</b> Belarus .....                               | <input checked="" type="checkbox"/> <b>MX</b> Mexico .....                                    |
| <input checked="" type="checkbox"/> <b>CA</b> Canada .....                                | <input checked="" type="checkbox"/> <b>NO</b> Norway .....                                    |
| <input checked="" type="checkbox"/> <b>CH and LI</b> Switzerland and Liechtenstein .....  | <input checked="" type="checkbox"/> <b>NZ</b> New Zealand .....                               |
| <input checked="" type="checkbox"/> <b>CN</b> China .....                                 | <input checked="" type="checkbox"/> <b>PL</b> Poland .....                                    |
| <input checked="" type="checkbox"/> <b>CU</b> Cuba .....                                  | <input checked="" type="checkbox"/> <b>PT</b> Portugal .....                                  |
| <input checked="" type="checkbox"/> <b>CZ</b> Czech Republic .....                        | <input checked="" type="checkbox"/> <b>RO</b> Romania .....                                   |
| <input checked="" type="checkbox"/> <b>DE</b> Germany .....                               | <input checked="" type="checkbox"/> <b>RU</b> Russian Federation .....                        |
| <input checked="" type="checkbox"/> <b>DK</b> Denmark .....                               | <input checked="" type="checkbox"/> <b>SD</b> Sudan .....                                     |
| <input checked="" type="checkbox"/> <b>EE</b> Estonia .....                               | <input checked="" type="checkbox"/> <b>SE</b> Sweden .....                                    |
| <input checked="" type="checkbox"/> <b>ES</b> Spain .....                                 | <input checked="" type="checkbox"/> <b>SG</b> Singapore .....                                 |
| <input checked="" type="checkbox"/> <b>FI</b> Finland .....                               | <input checked="" type="checkbox"/> <b>SI</b> Slovenia .....                                  |
| <input checked="" type="checkbox"/> <b>GB</b> United Kingdom .....                        | <input checked="" type="checkbox"/> <b>SK</b> Slovakia .....                                  |
| <input checked="" type="checkbox"/> <b>GD</b> Grenada .....                               | <input checked="" type="checkbox"/> <b>SL</b> Sierra Leone .....                              |
| <input checked="" type="checkbox"/> <b>GE</b> Georgia .....                               | <input checked="" type="checkbox"/> <b>TJ</b> Tajikistan .....                                |
| <input checked="" type="checkbox"/> <b>GH</b> Ghana .....                                 | <input checked="" type="checkbox"/> <b>TM</b> Turkmenistan .....                              |
| <input checked="" type="checkbox"/> <b>GM</b> Gambia .....                                | <input checked="" type="checkbox"/> <b>TR</b> Turkey .....                                    |
| <input checked="" type="checkbox"/> <b>HR</b> Croatia .....                               | <input checked="" type="checkbox"/> <b>TT</b> Trinidad and Tobago .....                       |
| <input checked="" type="checkbox"/> <b>HU</b> Hungary .....                               | <input checked="" type="checkbox"/> <b>UA</b> Ukraine .....                                   |
| <input checked="" type="checkbox"/> <b>ID</b> Indonesia .....                             | <input checked="" type="checkbox"/> <b>UG</b> Uganda .....                                    |
| <input checked="" type="checkbox"/> <b>IL</b> Israel .....                                | <input checked="" type="checkbox"/> <b>US</b> United States of America .....                  |
| <input checked="" type="checkbox"/> <b>IN</b> India .....                                 | .....(Continuation-in-part).....  |
| <input checked="" type="checkbox"/> <b>IS</b> Iceland .....                               | <input checked="" type="checkbox"/> <b>UZ</b> Uzbekistan .....                                |
| <input checked="" type="checkbox"/> <b>JP</b> Japan .....                                 | <input checked="" type="checkbox"/> <b>VN</b> Viet Nam .....                                  |
| <input checked="" type="checkbox"/> <b>KE</b> Kenya .....                                 | <input checked="" type="checkbox"/> <b>YU</b> Yugoslavia .....                                |
| <input checked="" type="checkbox"/> <b>KG</b> Kyrgyzstan .....                            | <input checked="" type="checkbox"/> <b>ZW</b> Zimbabwe .....                                  |
| <input checked="" type="checkbox"/> <b>KP</b> Democratic People's Republic of Korea ..... |   |
| <input checked="" type="checkbox"/> <b>KR</b> Republic of Korea .....                     |   |
| <input checked="" type="checkbox"/> <b>KZ</b> Kazakhstan .....                            |   |
| <input checked="" type="checkbox"/> <b>LC</b> Saint Lucia .....                           | <input checked="" type="checkbox"/> <b>.ZA</b> South Africa .....                             |
| <input checked="" type="checkbox"/> <b>LK</b> Sri Lanka .....                             | <input checked="" type="checkbox"/> <b>.EA</b> United Arab Emirates .....                     |
| <input checked="" type="checkbox"/> <b>LR</b> Liberia .....                               | <input type="checkbox"/> .....  |

Check-boxes reserved for designating States (for the purposes of a national patent) which have become party to the PCT after issuance of this sheet:

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

## Supplemental Box

If the Supplemental Box is not used, this sheet should not be included in the request.

1. If, in any of the Boxes, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No. ..." [indicate the number of the Box] and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:

- (i) if more than two persons are involved as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
- (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States Indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
- (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
- (iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
- (v) if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation" or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;
- (vi) if, in Box No. VI, there are more than three earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI;
- (vii) if, in Box No. VI, the earlier application is an ARIPO application: in such case, write "Continuation of Box No. VI", specify the number of the item corresponding to that earlier application and indicate at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed.

2. If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.

3. If the applicant claims, in respect of any designated Office, the benefits of provisions of the national law concerning non-prejudicial disclosures or exceptions to lack of novelty: in such case, write "Statement concerning non-prejudicial disclosures or exceptions to lack of novelty" and furnish that statement below.

### Continuation of Box No. V-Designation of States

US United States of America - continuation-in-part of US  
Patent Application  
Serial No. 09/100,412, filed  
20 June 1998 (20.06.98)

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claim is indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 20 June 1998 (20.06.98)	09/100,412	US		
item (2)				
item (3)				

☒ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): (1)

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

## Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):	Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):
ISA / US	Date (day/month/year)      Number      Country (or regional Office)

## Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets: request : 4 description (excluding sequence listing part) : 64 claims : 5 abstract : 1 drawings : sequence listing part of description : 62 Total number of sheets : 132	This international application is accompanied by the item(s) marked below: 1. <input checked="" type="checkbox"/> fee calculation sheet (in triplicate) 2. <input checked="" type="checkbox"/> separate signed power of attorney (unsigned) 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): 6. <input type="checkbox"/> translation of international application into (language): 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input checked="" type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input checked="" type="checkbox"/> other (specify): Transmittal Letter; Statement Under WIPO
---	---

Figure of the drawings which should accompany the abstract:

Language of filing of the international application: English

## Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).



Maria C.H. Lin  
Agent for Applicants

For receiving Office use only		2. Drawings:  <input type="checkbox"/> received:  <input type="checkbox"/> not received:
1. Date of actual receipt of the purported international application:		
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:		
4. Date of timely receipt of the required corrections under PCT Article 11(2):		
5. International Searching Authority (if two or more are competent): ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.	

Date of receipt of the record copy by the International Bureau:

For International Bureau use only

PCT

## FEE CALCULATION SHEET

Annex to the Request

Receiving Office use only

International application No.

Applicant's or agent's  
file reference

1151-4158PC1

Date stamp of the receiving Office

Applicant

UNITED BIOMEDICAL, INC., et al.

## CALCULATION OF PRESCRIBED FEES

1. TRANSMITTAL FEE . . . . . \$ 240.00 T

2. SEARCH FEE . . . . . \$ 450.00 S

International search to be carried out by US

(If two or more International Searching Authorities are competent in relation to the international application, indicate the name of the Authority which is chosen to carry out the international search.)

## 3. INTERNATIONAL FEE

## Basic Fee

The international application contains 132 sheets.

first 30 sheets . . . . . \$ 455.00 b1

 $\frac{102}{\text{remaining sheets}} \times \frac{10}{\text{additional amount}} = \$ 1,020.00$  b2

Add amounts entered at b1 and b2 and enter total at B . . . . . \$ 1,475.00 B

## Designation Fees

The international application contains 79 designations.

 $\frac{10}{\text{number of designation fees payable (maximum 10)}} \times \frac{105}{\text{amount of designation fee}} = \$ 1,050.00$  D

Add amounts entered at B and D and enter total at I . . . . . \$ 2,525.00 I

(Applicants from certain States are entitled to a reduction of 75% of the international fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at I is 25% of the sum of the amounts entered at B and D.)

4. FEE FOR PRIORITY DOCUMENT (if applicable) . . . . . \$ 15.00 P

5. TOTAL FEES PAYABLE . . . . . \$ 3,230.00

Add amounts entered at T, S, I and P, and enter total in the TOTAL box

TOTAL

☐ The designation fees are not paid at this time.

## MODE OF PAYMENT

☐ authorization to charge  
deposit account (see below)☒ cheque☐ postal money order☐ bank draft☐ cash☐ revenue stamps☐ coupons☐ other (specify):

## DEPOSIT ACCOUNT AUTHORIZATION (this mode of payment may not be available at all receiving Offices)

The RO/ US ☐ is hereby authorized to charge the total fees indicated above to my deposit account.☒ (this check-box may be marked only if the conditions for deposit accounts of the receiving Office so permit) is hereby authorized to charge any deficiency or credit any overpayment in the total fees indicated above to my deposit account.☒ is hereby authorized to charge the fee for preparation and transmittal of the priority document to the International Bureau of WIPO to my deposit account.

13-4500

21 June 1999

Deposit Account No.

Date (day/month/year)

Signature

Maria C.H. Lin